

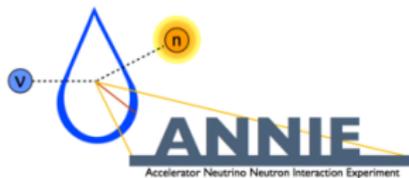
# ANNIE experiment - Update and status

AEM - April 11<sup>th</sup>, 2016

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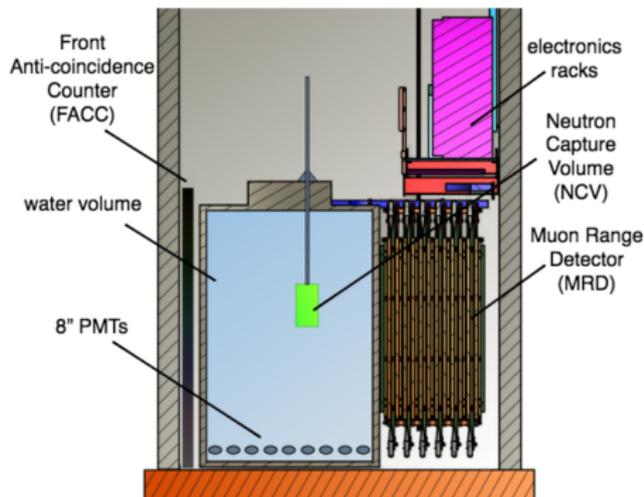
April 11<sup>th</sup>, 2016



**UC DAVIS**  
UNIVERSITY OF CALIFORNIA

## Quick reminder

- ANNIE is the Accelerator Neutrino-Neutron Interaction Experiment
- Aims at measuring the production rate of neutrons from neutrino interactions in water
- Phase 1 → "Proof of concept" and background measurement
- Phase 2 (to be approved) → Physics run
- The main detector and the electronics have been installed in the SciBooNE hall in the past few weeks



## The past two weeks - Electronics



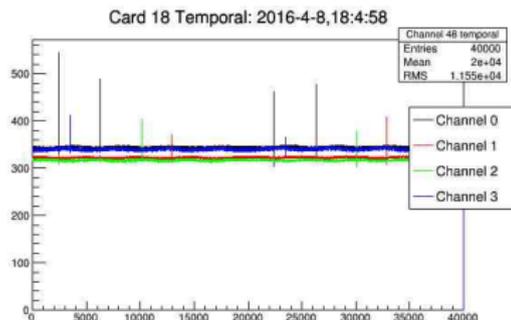
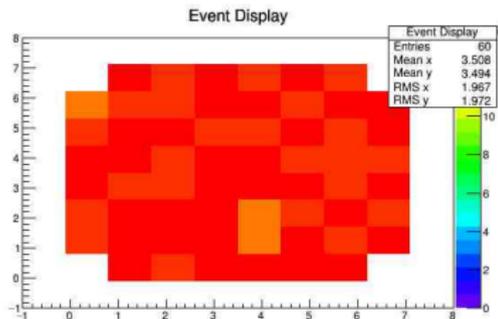
- All the signal and HV cables of the different parts of the detector have been laid
- The electronics racks have been inspected (preliminary ORC) → Allowed to run unattended
- DAQ and HV systems have been running smoothly since
- Collaborators from ISU, Sheffield and Queen Mary are working on the software and firmware of those systems

## The past two weeks - Light tightness



- Our signal → Small pulses of scintillation or Čerenkov light
- Need to lightproof the detector from outside light
- "Suspicious" spots covered with black tape and plastic bags
- Noise rate difference between lights on/off is now 25% and will be reduced
- Another series of tests will be performed after the water fill and the NCV installation

## The past two weeks - First tests and results



- All PMTs have been tested, 1 out of 60 did not survived the installation
- Noise rates measurements have been performed
- DAQ system has been operated with the full detector (veto + water tank + Muon Range Detector)

## What's next ?



- Water fill on Wednesday followed by commissioning with water
- Beginning of steady data taking
- NCV installation → Procedure is being developed closely with ES&H (Jim Priest, Angela Aparicio and Terry Tope)
- Shifts and monitoring procedures are being implemented

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**Thank you for your attention !**